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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,838	01/18/2001	Stephen William McCahon	P 6048.10001	9260

7590

03/14/2003

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EXAMINER

CHOW, DOON Y

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 03/14/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,838

Applicant(s)

MCCAHOE ET AL.

Examiner

Dennis-Doon Chow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 26-29, 33, 36 and 40-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Kokubo (5530456).

Kokubo discloses a device for producing a control signal to control an apparatus based on the movement of a reflecting surface, comprising: a light source for illuminating the reflecting surface, wherein the reflecting surface is a portion of a human hand; a sensor for receiving from the reflecting surface a pattern of light; and an interface circuit for producing the control signal from the sensor electrical signal.

3. Claims 1, 22, 23, 26-29, 33-36, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Bidiville et al. (5288993).

Bidiville discloses a device (mouse, trackball, column 2, lines 33-36) for producing a control signal to control an apparatus based on the movement of a reflecting surface, comprising: a light source for illuminating the reflecting surface; a sensor for receiving from the reflecting surface a pattern of light; and an interface circuit for producing the control signal from the sensor electrical signal.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-25, 30-32, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokubo.

Regarding to claims 17-21 and 37-39, Kokubo does not explicitly disclose the light source comprises a coherent light source, a laser, or linearly polarized light. However, using a light source that comprises a coherent light source, a laser, or linearly polarized light is in an input device is well known in the art. It would have been obvious to one of ordinary skill in the art to use the well known light source in Kokubo's device because this well known light source works as well as the Kokubo's light source.

Regarding to claims 22-23, using optics for directing or enhancing light in an optical input device is well known in the art. It would have been obvious to one of ordinary skill in the art to use the known optics in Kokubo's device for the purpose of directing or enhancing light.

Regarding to claim 24-25, amplifying and filtering a sensor signal in an optical input device are well known in the art. It would have been obvious to one ordinary skill in the art to use the well known amplifying and filtering means in Kokubo's input device

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because the weak sensor signal generated by Kokubo's device needs to amplify and filter so that a stronger and purer sensor signal can be generated.

Regarding claims 30 -32, using an optical input device to control a display device for representing a 3D image, a robotic device, or virtual reality device is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art to use Kokubo's optical input device to control a display device for representing a 3D image, a robotic device, or a virtual reality device.

6. Claims 17-21, 24, 25, 30-32, 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bidiville et al.

Regarding to claims 17-21, 24, 25, 30, 32, and 37-39, the disclosures of these claims in the above paragraphs applied here with the exception of Kokubo being replaced by Bidiville.

7. Claims 2-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kokubo in view of Nolte et al. (6342721).

Kokubo does not disclose the sensor being a photo-emf sensor.

Nolte discloses a photo-emf sensor that can be constructed in many different ways (see figures). The emf sensor comprises a plurality of electrodes and a gap between adjacent electrodes,. The plurality of electrodes can be constructed in many different ways (see figures 1-3, and 8-11).

It would have been obvious to one ordinary skill in the art to use Nolte's photo-emf sensor in Kokubo's device as the sensor since Kokubo does not teach using any specific optical sensor.

8. Claims 2-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bidiville et al. in view of Nolte et al.

The disclosures of these claims in the above paragraphs applied here with the exception of Kokubo being replaced by Bidiville.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gordon et al. teach an optical input device.

One et al. (JP 59089473) teach a photo-emf sensor.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Don Chow whose telephone number is 703-305-4398. The examiner can normally be reached on 8:30-6:00, Alternate Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saris can be reached on 703-305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

D. Chow
March 9, 2003


DENNIS-DOON CHOW
PRIMARY EXAMINER